

THE ALLAWAY CENTRAL VACUUM CLEANING SYSTEM DESIGN AND INSTALLATION MANUAL



CONGRATULATIONS ON PURCHASING THE ALLAWAY CENTRAL VACUUM CLEANING SYSTEM.

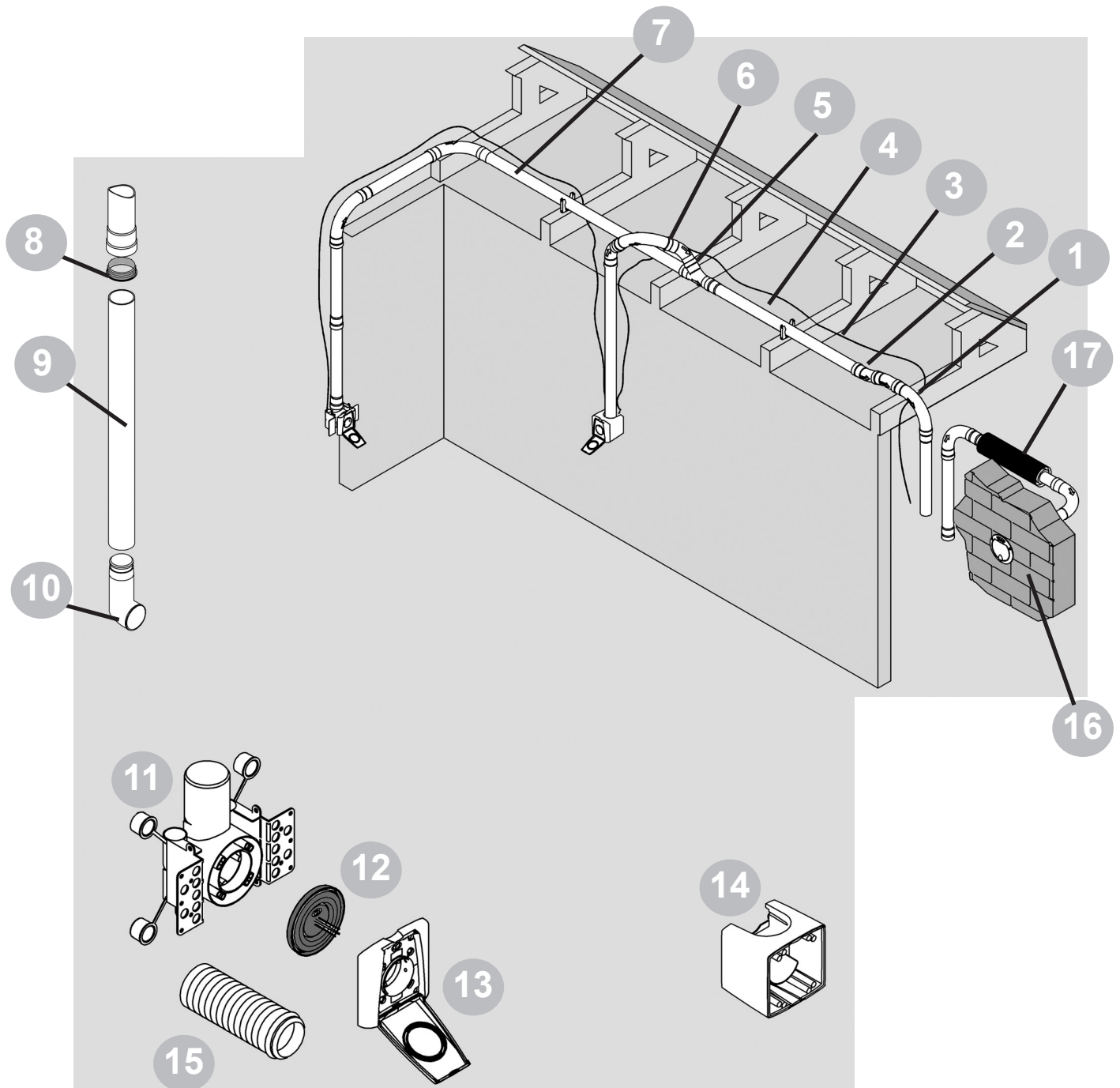
This manual pertains to Allaway central vacuum cleaning systems intended for domestic use. Please read this manual carefully before starting the installation. The usage and maintenance manual for the central unit is always included in the packaging. Please follow all official regulations in design and installation. You can ensure the operation, efficiency and long service life of your central vacuum cleaning system by following all instructions and by only using original Allaway parts and supplies. The installer must consider whether the details specified in the instructions are suited to the operating conditions in each case.

DESIGNING THE SYSTEM

INSTALLATION PHASES

1. DECIDE WHETHER YOU WANT TO DESIGN AND INSTALL THE SYSTEM YOURSELF OR HIRE AN EXPERT.
2. DESIGN THE SYSTEM FOR YOUR HOME.
3. INSTALL THE DUST PIPING SYSTEM, LOW VOLTAGE WIRES AND MOUNTING BRACKETS. SUPPORT THE PIPES WELL.
4. CONNECT THE STARTING CIRCUITS OF THE WALL INLETS AND INSTALL THE COVER ASSEMBLIES.
5. INSTALL THE CENTRAL UNIT.
6. CHECK THAT THE SYSTEM WORKS AND THAT THERE ARE NO LEAKS BEFORE CLOSING THE STRUCTURES.
7. INSTALL THE CLEANING EQUIPMENT STORAGE BRACKET(S).
8. SAVE YOUR DESIGNS INTO THE HOUSE FOLDER.
9. SAVE THE PRODUCT LABELS AND INSTRUCTIONS INTO THE HOUSE FOLDER.

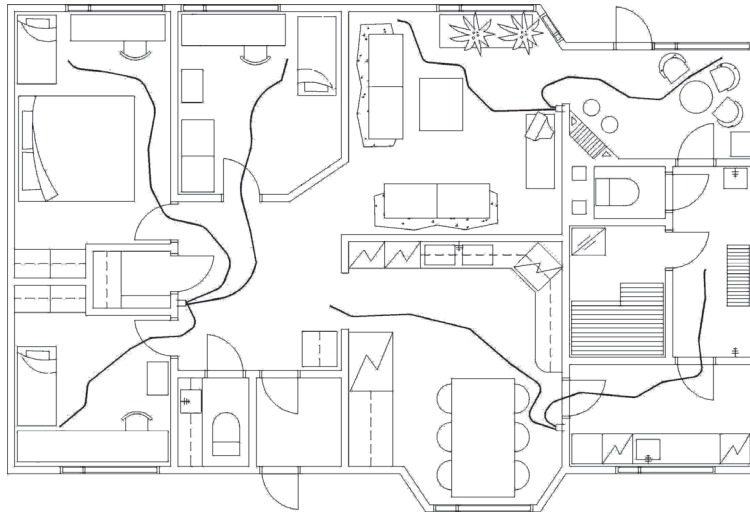
PIPING SYSTEM PARTS



- | | |
|----------------------|---------------------------------------|
| 1 Elbow 90° | 10 Wall inlet elbow coupling |
| 2 Elbow 15° | 11 Mounting bracket Optima |
| 3 Low voltage wiring | 12 Moulding cover Optima |
| 4 Pipe clamp 44 mm | 13 Cover assembly Optima |
| 5 Y branch 45° | 14 Surface installation casing Optima |
| 6 Elbow 45° | 15 Extension 13 cm |
| 7 Dust pipe Ø 44 mm | 16 Blow-out vent cap |
| 8 Locking seal | 17 Silencer for exhaust air |

Please note! All of the components specified in this parts list are not part of the standard pipe packages or they are replacement parts for each other.

DESIGNING THE PIPING SYSTEM

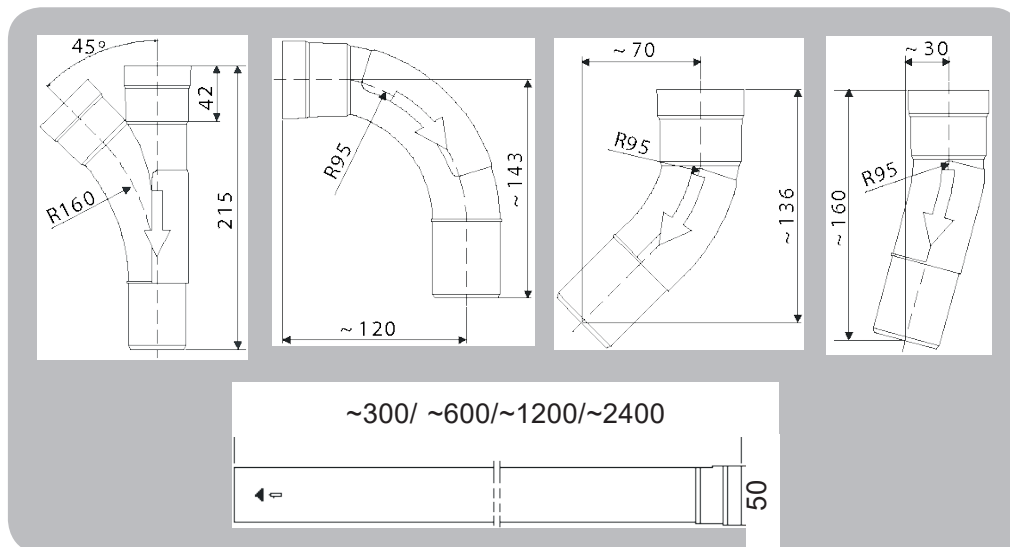


Start designing the system by deciding where to place the wall inlets. Marking the locations on a blueprint drawing in a scale of 1:50 or 1:100 is the most convenient way. Use a piece of string or wire corresponding to the length of the suction hose in the chosen scale to help you with the design. E.g. 1:50 = 16 cm and 1:100 = 8 cm corresponding to 8 metres of suction hose. The suction hose is 8, 9, 10 or 12 metres long according to the contents of the cleaning equipment set.

Pay attention to furnishings when installing the wall inlets, and ensure that the system covers all premises that need to be cleaned. Please also note the use of Allway accessories like the pre-separator or the expandable hose. Place the sweep slot in the kitchen and/or the utility room, i.e. rooms that require frequent cleaning. A wall inlet is needed for the expandable hose in the hallway and kitchen and next to the utility room, if there is one in the building. In order to use the pre-separator, the wall inlet can be installed near a fireplace.

Wall inlets are usually placed at the same height with light switches or near the floor at the same height as electric outlets.

Duo and Z series central vacuum cleaners can also be used via the suction inlet on the unit itself. Place the Duo or Z series central vacuum cleaner in its installation space in a position that provides access to the unit's suction inlet.



We recommend installing the dust piping system in the ceiling, or the intermediate floor in multi-level houses, in the same configuration as other building technical installations, such as ventilation, water pipes and sewage pipes. If you install pipes in cold spaces, such as the ceiling, insulate the pipe with thermal insulation material. Installing the piping system in the ceiling structures of saunas and near heating elements should be avoided. In these cases the pipes must be insulated against the heat.

When planning the pipe routes, please observe any structures affecting the route, and other building technology, such as ceiling elevations and ventilation pipes. When installing the central unit on upper floors, it is recommended that the ascent be a maximum of 4 metres. There can be several ascents if there is a horizontal installation between the ascents that is as long as the ascent.

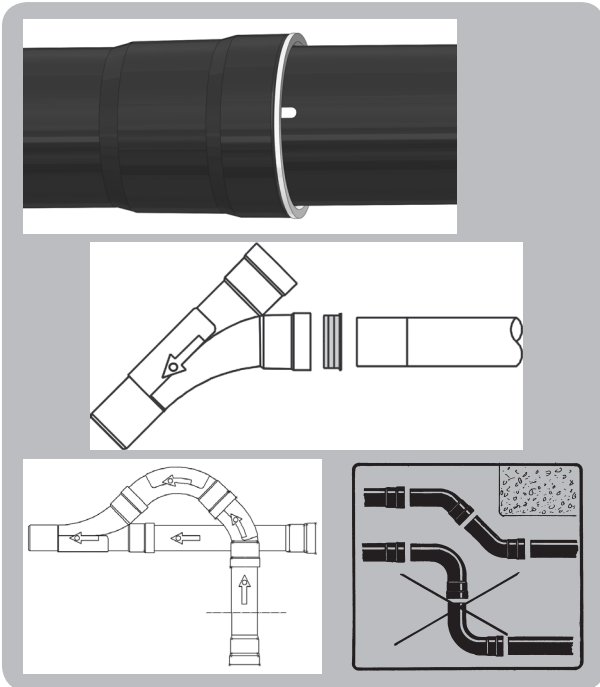
The parts of the Allway dust piping are:

- Y branch 45°
- Elbow 90°
- Elbow 45°
- Elbow 15°
- Dust pipe ~ 0.3 m, ~ 0.6 m, ~ 1.2 m and ~ 2.4 m

The outer diameter of the pipe is 44 mm. The outer diameter of the muff is 50 mm.

INSTALLING THE PIPING

ATTACHING THE PIPES



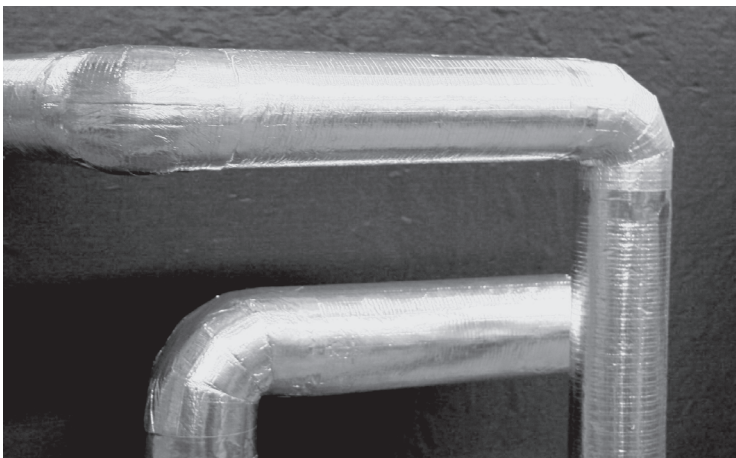
You may start your installation at either the central unit, by branching the piping in different directions, or at the furthest wall inlet towards the central unit along the main line. Base your choice on the renovation or construction schedule of the building.

Check that the parts are immaculate both inside and out and clean them of any dirt. Install the yellow locking seal inside the sleeve. Push the pipe directly into the sleeve, rotating the pipe slightly, until the end of the pipe is sealed to the bottom of the sleeve. The pipe is sufficiently extended when the point of connection of the pipes is over the white marking line. If you cut the pipe, draw the marking line at the correct point using another marked pipe. The locking seal ensures and locks the joint. Branches must always be connected to the body pipe from above or one side.

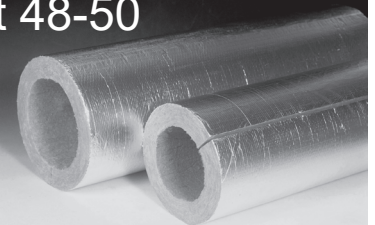
The joints must be situated in the correct way, ensuring that there are no collision surfaces in the piping where shards of glass, toothpicks, nails, etc. could catch. The arrows in the parts of the piping show the direction of the flow.

Please note when installing the piping that **the pipe muff should always face the wall inlet**. On the exhaust side, the sleeve must be towards the central unit.

INSULATING THE PIPES



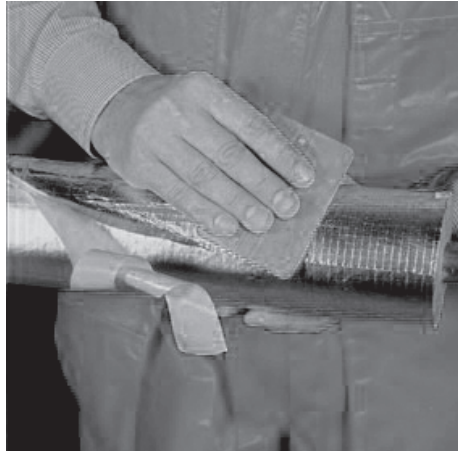
PAROC Hvac Section
AluCoat 48-50



When installing the piping in cold spaces such as ceilings, insulate it using thermal insulation with a thickness of 50 mm or more, such as PAROC Hvac Section AluCoat 48-50. Otherwise, the inside of the pipe will bleed or gather frost and dirt.

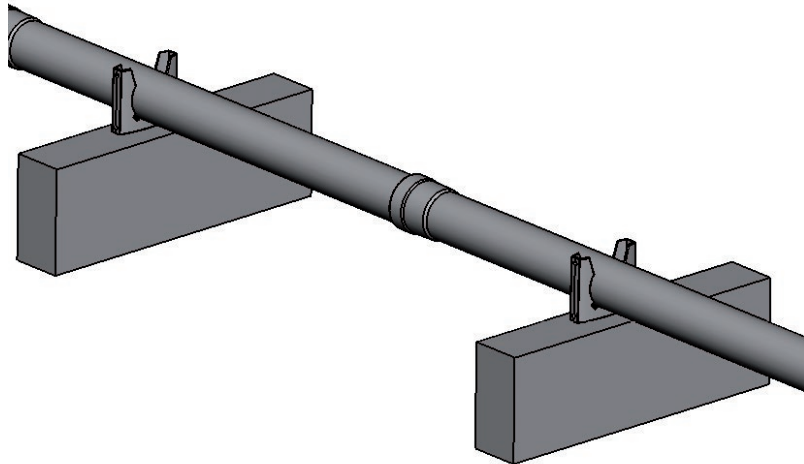


Stopping the steam



A steam stop must also be installed in the exhaust pipe in cold spaces. When leading the pipe through a wall between heated and unheated spaces, thermal insulation, such as fairleads available at HPAC stores, as well as steam stops must be used for the lead-through.

SUPPORTING THE PIPES



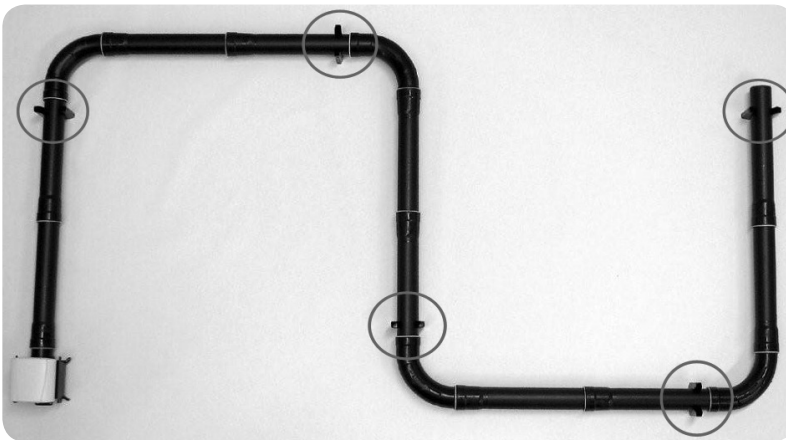
Make sure that the temperature of the piping stays close to room temperature during installation. Otherwise thermal insulation will be necessary in ceilings, for example.

Use pipe clamps or the metal clamps included in the pipe kit to support the pipes. Support the pipes to the framework of the wall, floor and ceiling. Select the supporting distance according to the structures. If the distance between the studs is 600 mm, the distance between the pipe supports should be 1,200 mm or 1,800 mm. Each pipe should be supported. When supporting the pipes, ensure that subsequent maintenance remains possible in the vicinity of the piping system of the building.

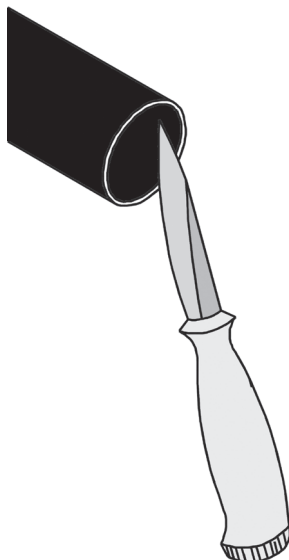
Support insulated pipes on top of the insulation with a steel band, for example. This will allow the support to serve as a shock absorber and as sound insulation.

Stretches of piping that are exposed to extreme changes in temperature at the installation phase must be supported as follows:

- Only use Allaway pipe clamps to support the piping. These will support and guide the pipe without preventing natural thermal movement of the pipe.
- Install the pipe clamp in a way that allows the pipe to move freely in the longitudinal direction.
- Support the piping in a manner that allows thermal expansion and contraction in the longitudinal direction. Sleeve joints in particular should not be subject to extension strain as the piping contracts.
- Only install the pipe clamps in stretches of pipe without bends, and at a sufficient distance from the sleeve joints to enable thermal expansion and contraction. The thermal expansion coefficient is approximately $0.1\text{mm/m } ^\circ\text{C}$.
- In order to allow for the movement of the pipe, only one pipe clamp is allowed near an elbow piece, as shown in the picture below. The pipe clamp on the other side of the elbow piece must be at least 70 cm from the elbow piece. No pipe clamps are installed on direct stretches of pipe shorter than 70 cm.

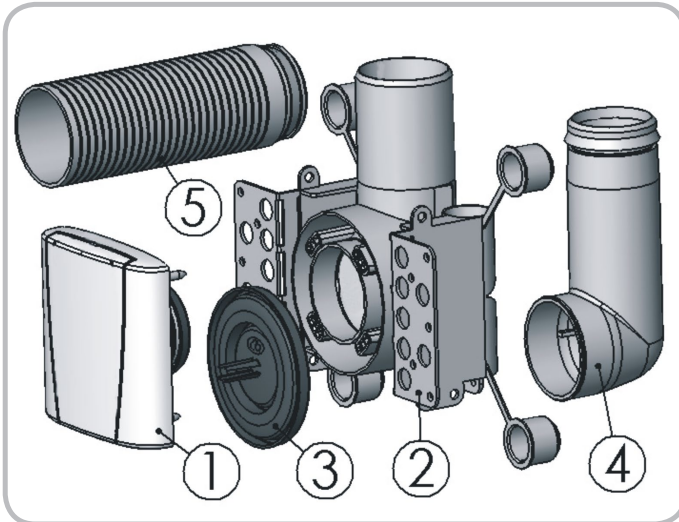


CUTTING PIPES



Cut pipes vertically with a fine-toothed saw. Remove any burr. Any remaining burr on the pipe's cut surface causes flow resistance, leaks and a blockage hazard.

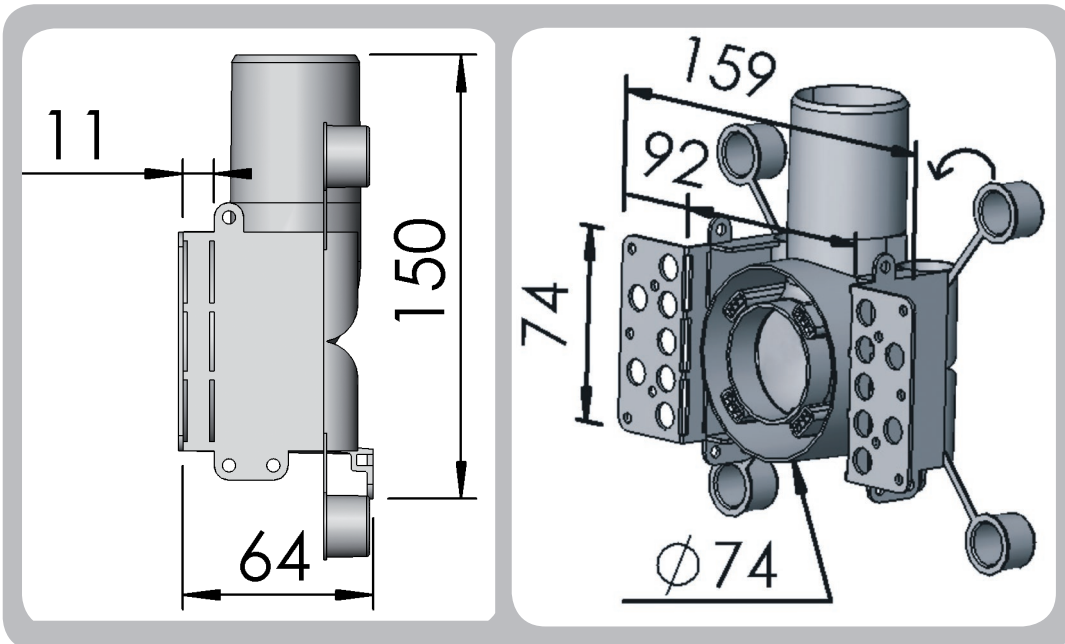
OPTIMA WALL INLET



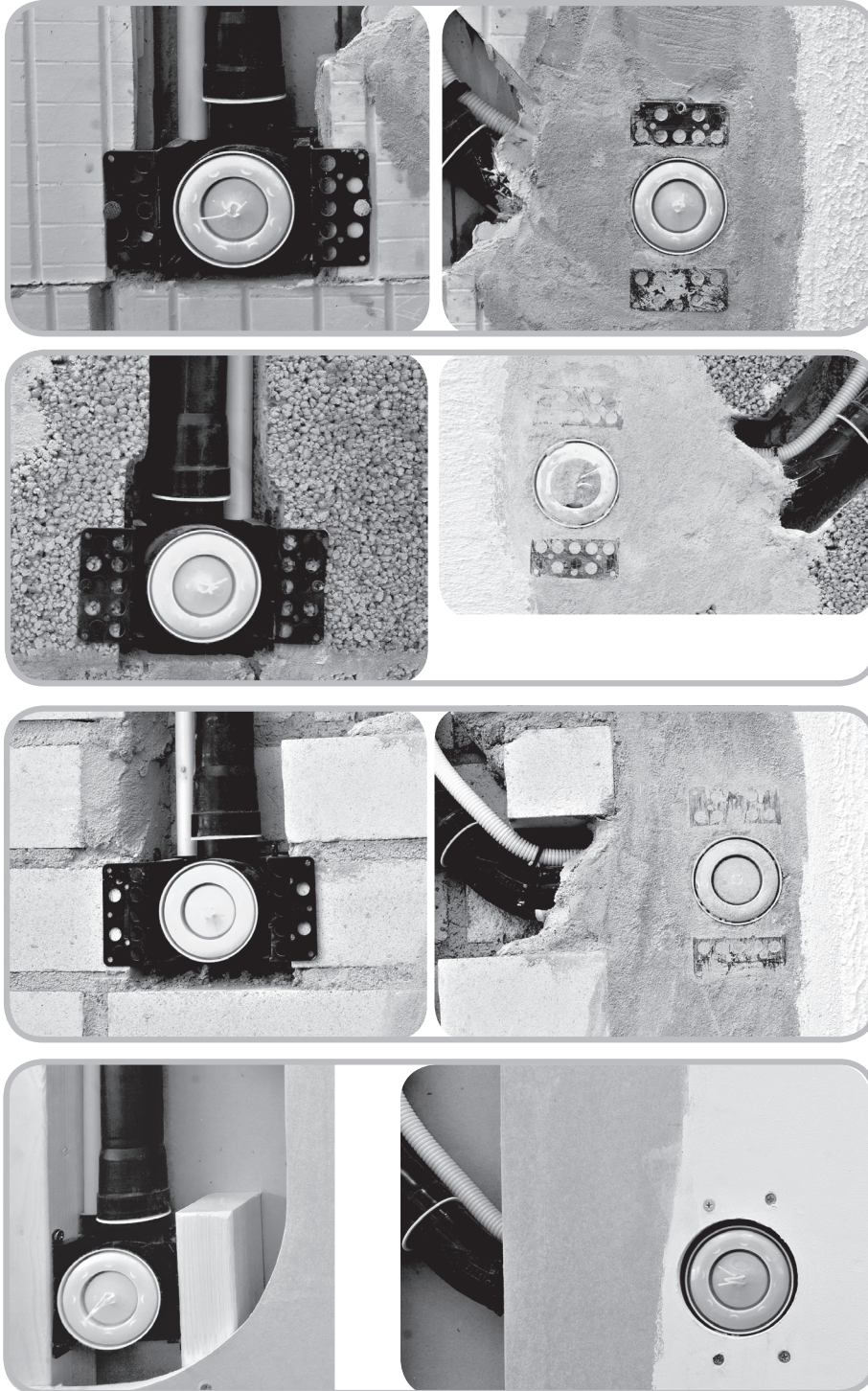
This manual pertains to the installation of ALLAWAY OPTIMA wall inlets. The parts of the Optima wall inlet are:

- 1 Cover assembly
- 2 Mounting bracket
- 3 Moulding cover
- 4 Elbow coupling
- 5 Extension 13 cm

You can select the opening direction of the Optima wall inlet cover in relation to the mounting bracket freely in increments of 90 degrees. There is also a wide adjustment tolerance for the cover assembly. In addition to wooden, steel-framed and light partition walls, the Optima wall inlet can easily be installed in cast or masoned structures, as well. Use a surface installation casing for surface installations.

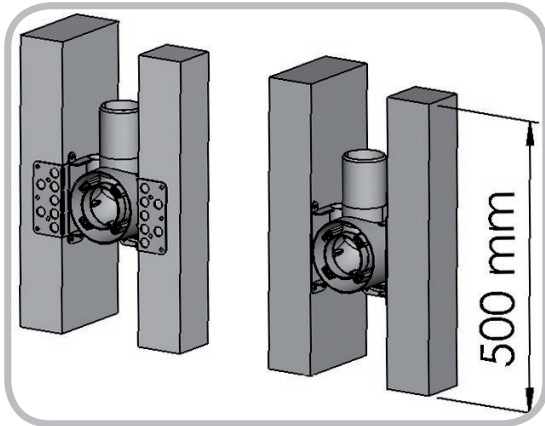


MOUNTING BRACKET INSTALLATION



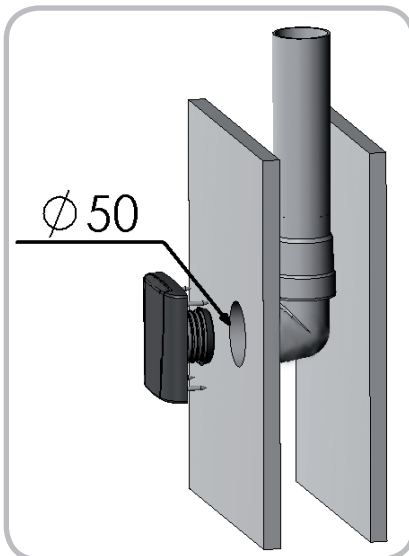
Fit the mounting bracket in its correct place. The low voltage wires should run inside protective tubing. There are \varnothing 20 mm holes for protective tubing for low voltage cables on both sides of the mounting bracket. If you are using smaller (\varnothing 16 mm) protective tubing for installation, remove the bottoms of the protective caps and press protective caps in place. Depending on the installation space, remove any excess edges on the mounting bracket. Plug the empty protective tubing holes. Use a moulding cover to protect the mounting bracket during construction.

INSTALLATION OF THE MOUNTING BRACKET ON LIGHT PARTITION

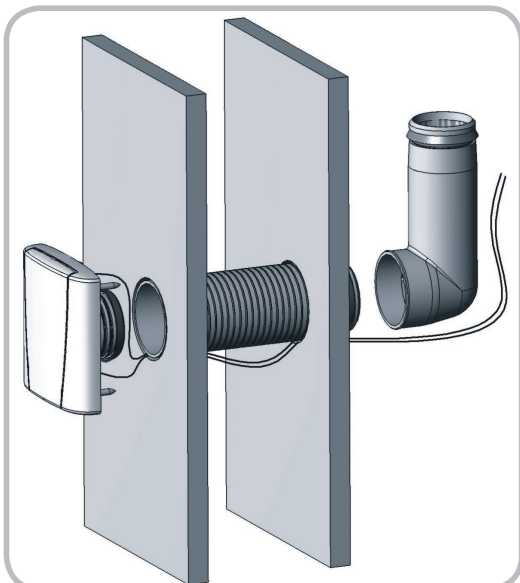


Install the mounting bracket to the frame of the wall with a nail or a screw. The most stable way of mounting the bracket is to attach it on both sides using an additional frame of approximately 500 mm.

SLAB WALL INSTALLATION WITH NO MOUNTING BRACKET

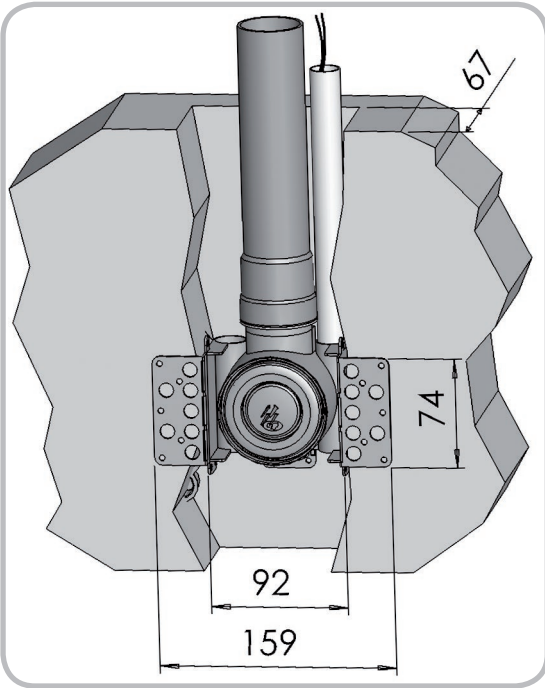


Drill a hole with a diameter of 50 mm into the wall slab. Press the wall inlet elbow coupling onto the end of the dust pipe. Depending on the wall structure, a straight, muffless pipe can be used on the exhaust from the elbow coupling, e.g. if you are installing onto a wall with a frame thickness of 44 mm. If the structures and construction schedule permit, attach the elbow coupling onto the surface of the slab with pipe clamps or a steel band. The pipe will be held in place when you press the wall inlet into the elbow coupling. If the dust pipe and elbow coupling cannot be supported in that particular installation, you can ensure the connection between the elbow coupling and the dust pipe with tape. This prevents the elbow coupling from coming loose and falling into the wall structure during wall inlet maintenance, for example.



Use an extension if the coupling muff of the cover assembly does not reach the elbow coupling. The length of the extension is 13 cm. Cut the extension to a suitable length and press the elbow coupling and the dust pipe tightly against the wall slab. If necessary, you may use several extensions back to back. Connect the low voltage wires and press the cover assembly into place. Attach the screws. **Press the dust pipe until the 90° bend in the elbow coupling.**

CAST AND MASONED STRUCTURES

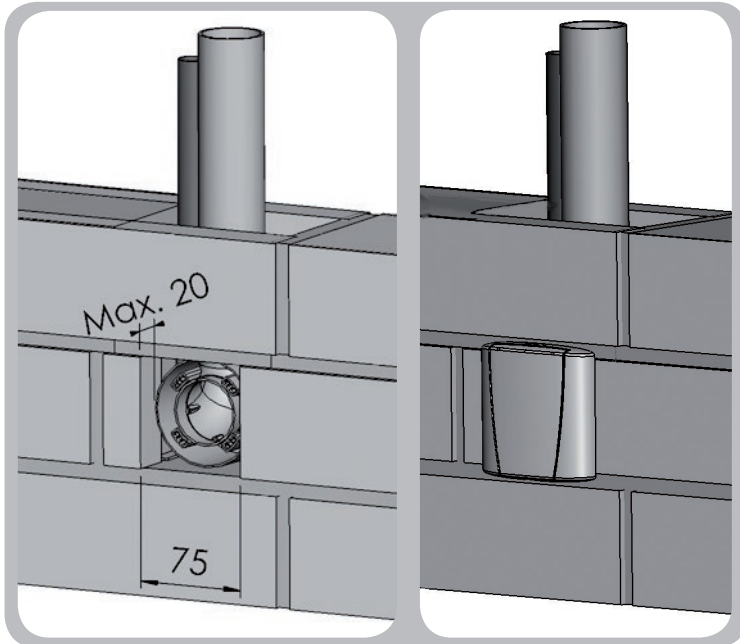


When installing a wall inlet in casting or masonry, use a mounting bracket and a protective cover. Install the protective tubing for the low voltage wires and the moulding cover in the mounting bracket. Plug the excess holes for low voltage wires in the mounting bracket. The front surface of the mounting bracket should be level with the surface. The attachment should be sturdy enough to keep the piping and the mounting bracket in place during casting or masonry. Seal the connection points for the piping covered by the cast with duct tape, so that the water within the wet cast cannot enter the piping.

When the cast is dry, remove the moulding cover. The moulding cover is easy to find thanks to the red spikes on the surface of the plastering. Pull the low voltage wires through the protective tubing into the mounting bracket. Leave approximately 20 cm of working allowance for the wires.

If you are using the grouting or plastering method in installing the wall inlet, the groove for the wall inlet should be 75 mm wide and 65 mm deep. The required dimensions for just the dust pipe and protective tubing for the low voltage wires are 75 mm x 55 mm.

INSTALLING THE WALL INLETS TO BRICK WALLS



When installing a wall inlet to a brick wall, the bricks must be split or a groove must be made for the dust pipe. Lead the low voltage wire to the wall inlet in protective tubing. If the wall is coated, it can be completely masonry. Saw a hole in the wall for the pipe from the side that is to be coated. The space for the pipe can also be left during masonry.

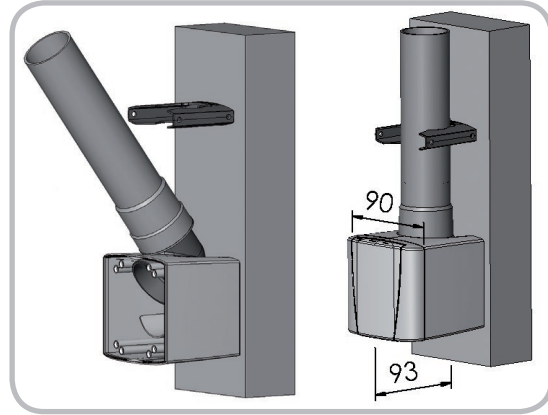
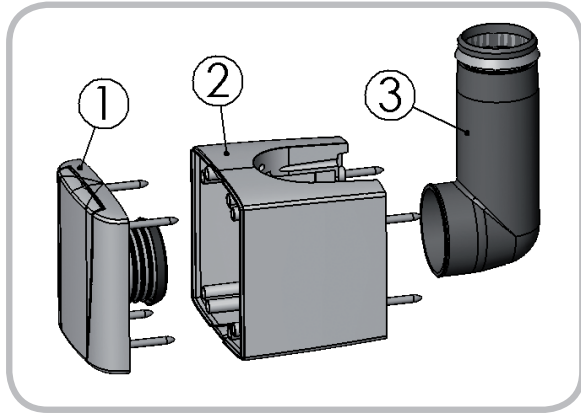
Install the dust pipe, low voltage wire, protective tubing, mounting bracket and the protective cover in the finished groove. Use filler to fill up the groove up to the level of the wall surface.

INSTALLATION IN A LOG BUILDING

In log homes, the wall inlets can be best installed in light partition walls (panelled walls), masonry walls or the support structure of fixed furniture. Timber is a valuable material which should be preserved. Avoid unnecessary drilling through logs.

Be sure to allow for settling of the log framework in the installation of the piping. A log wall sinks between 10 and 50 mm for each metre in height. Leave sufficient clearance for the pipes in long vertical lines in accordance with the building's erection instructions.

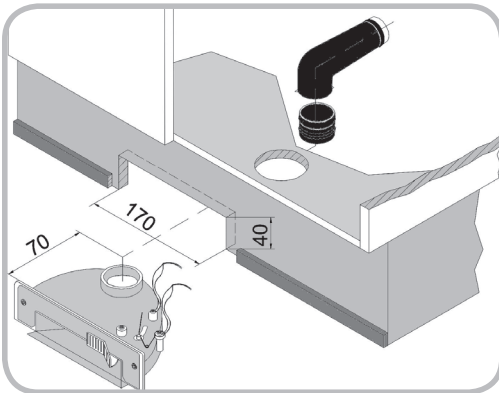
SURFACE MOUNTING OF WALL INLETS



Casing for surface installation (accessory, part 2 in figure) is used in the surface installation of the piping. Attach the casing for surface installation to the wall. Attach the elbow coupling (3) to the dust pipe and place the pipe into the casing. Attach the low voltage wires to the cover assembly and install the assembly into the casing.

Press the dust pipe until the 90° bend in the elbow coupling.

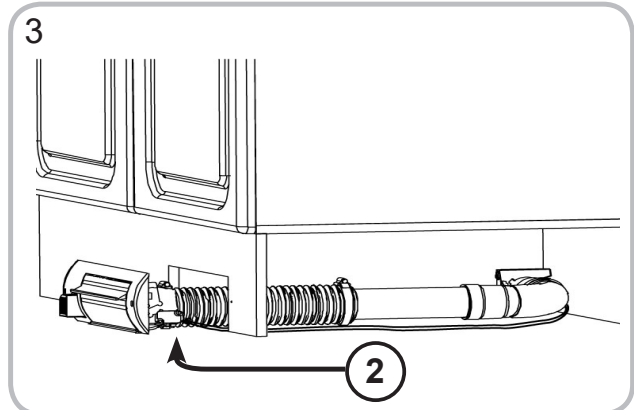
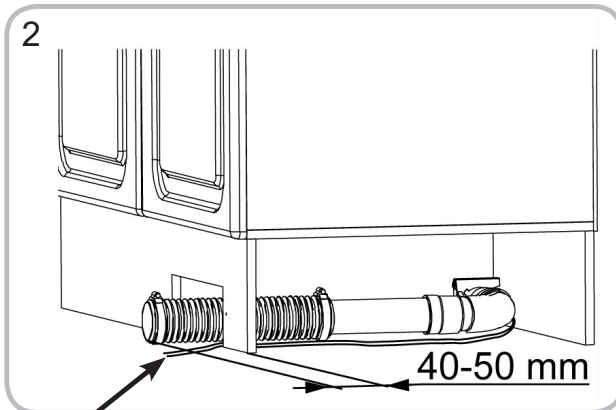
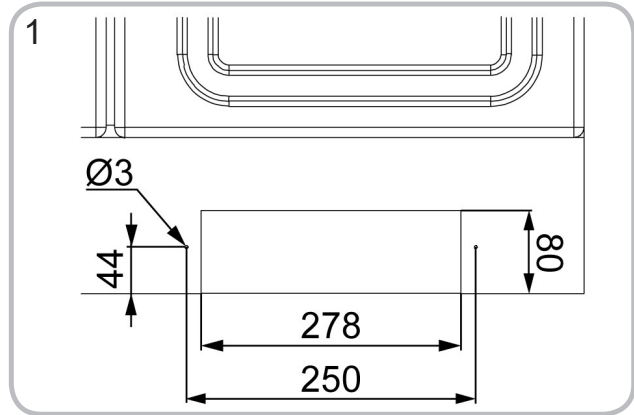
INSTALLING THE SWEEP SLOT



Install the sweep slot to the support structure of a cabinet (recommended) or to a thick enough wall (minimum height 100 mm, minimum depth 110 mm) in accordance with the installation instructions in the package. The dust pipe from the sweep slot should be parallel to the floor. The height of the upper surface of the pipe should be 95 mm above the finished floor. Please observe any maintenance of the sweep slot, i.e. a maintenance slot, when installing it to the wall. It must be possible to lift the elbow coupling upwards in order to remove the sweep slot from the wall for any maintenance.

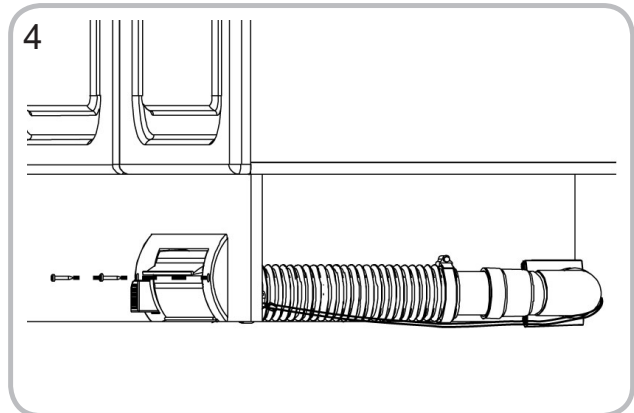
THE SWEEP SLOT EUROPE

Install the sweep slot to the support structure of a cabinet (recommended) or to a thick enough wall (minimum height 100 mm, minimum depth 350 mm) in accordance with the installation instructions in the package.

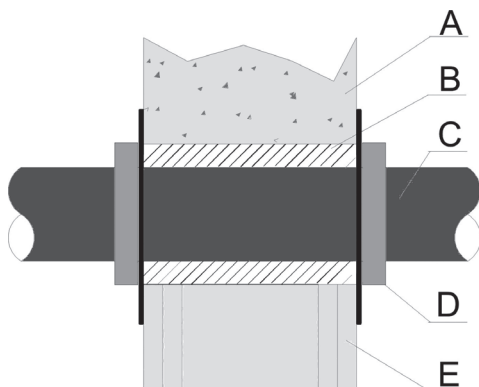


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1	Low voltage leads
2	Low voltage leads have been connected to the microswitch



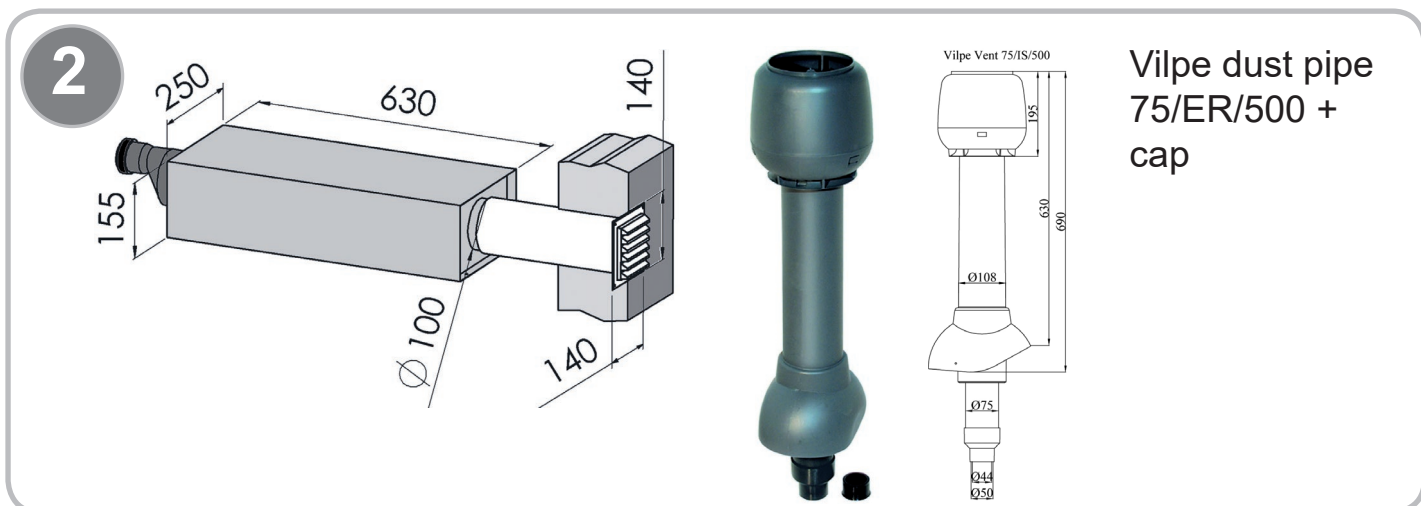
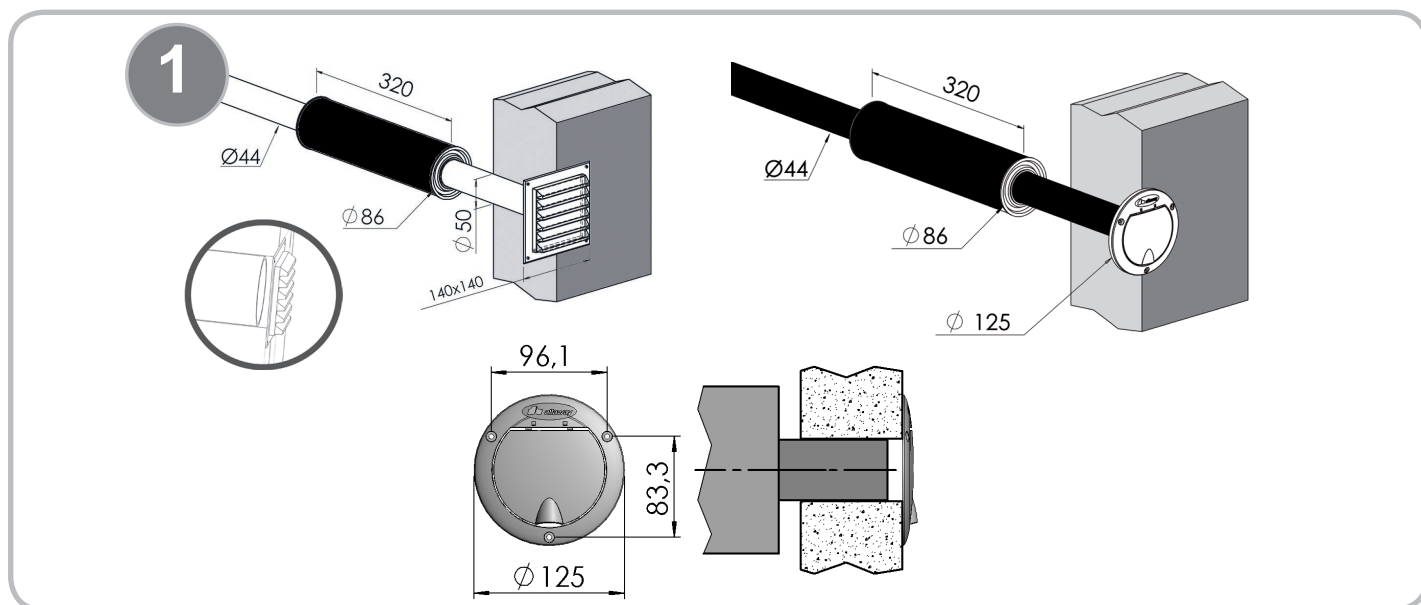
LEAD-THROUGHS IN COMPARTMENTATION STRUCTURES



- A Fire wall
- B Insulation with non-flammable material
- C Dust pipe Ø 44 mm
- D Firestop collar, e.g. Hilti CP 643-50/1.5"
- E Compartmentation wall (plate structure)

In detached houses, the garage and boiler room are usually separate fire compartments. Pipes may be led through compartmentation structures, assuming that the lead-through does not significantly reduce the fireproof properties of the structures. Please follow all authority instructions and regulations. Use type approved firestop collars, for example. Install the firestop collar according to the manufacturer's instructions. **If necessary, ensure that the protection and casing class of the central unit correspond to the requirements of its location and the related equipment. More information is available from the local officials.**

EXHAUST PIPE AND SILENCING



Exhaust air is always led outside. However, if Duo is equipped with a HEPA exhaust air filter, exhaust air can be returned to the room. Direct the exhaust air so that it causes minimal disturbance to the use of the garden, i.e. not onto the patio, for example. Lead the exhaust air as high from the ground as possible and at a sufficient distance from any vents, opening windows and ventilation replacement air holes. Cut the exhaust pipe running through the wall level at wall surface and attach the blow-out vent cap onto the outer surface of the wall. Please observe any snow accumulation near walls when placing the exhaust pipe.

If you lead exhaust air through the ceiling, perform the roof lead-through in accordance with instructions issued by the roofing manufacturer. Prevent rainwater from entering the exhaust pipe and silencer. For ceiling lead-through, the Vilpe exhaust pipe may be used (Dust pipes 75/ER/500 + cap), for example. A rain cap and a Ø44/50 pipe connector are included in the product. You will also need a ceiling lead-through kit, selected according to the roof covering.

The recommended Allaway dust pipe exhaust pipe length is less than 5 metres. In other cases, use a smooth pipe that has a larger inner diameter, e.g. Ø 75 mm. Adapt the size of the pipe with a 44/75/80 converter coupling muff.

The place for the silencer for exhaust air (Figure 1) is located as near to the end of the exhaust pipe as possible. The pipe following the turbo silencer (Figure 2) must have an inner diameter of 100 mm until the exhaust hole. Install the blow-out vent cap to the outside wall to protect the exhaust pipe. Leave 2 cm of space between the blow-out grating and the exhaust air pipe. This will reduce the level of noise.

The exhaust/turbo silencer may not be installed onto the suction side.

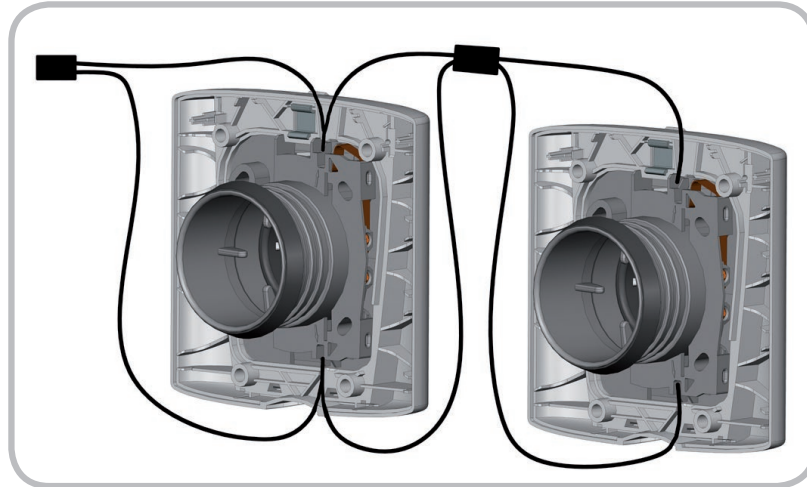
The silencer for exhaust air (Figure 1) and the turbo silencer (Figure 2) are accessories. The packaging includes the necessary connection parts for Allaway piping. Please note that you can install one exhaust air silencer or turbo silencer to the end of the exhaust air pipe and an exhaust pipe close to the central unit. You may add another silencer for exhaust air to the beginning.

HANDLING, TRANSPORTATION AND STORAGE OF THE PIPES

Handle the pipes with care. Avoid handling them at temperatures below -15 °C. Do not allow pipes to be strained or to rub against sharp edges. Store them on a flat surface and protect them from sunlight during long-term storage.

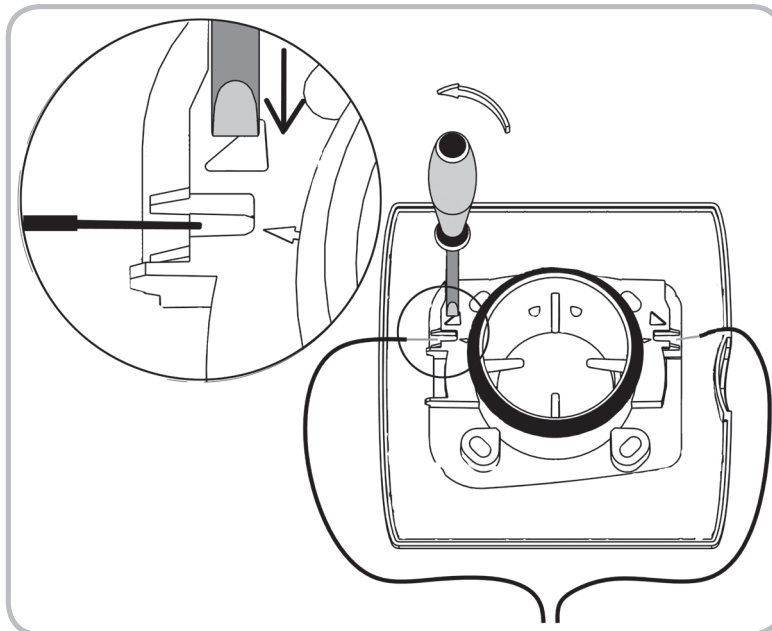
COVER ASSEMBLY INSTALLATION

STARTING CIRCUIT



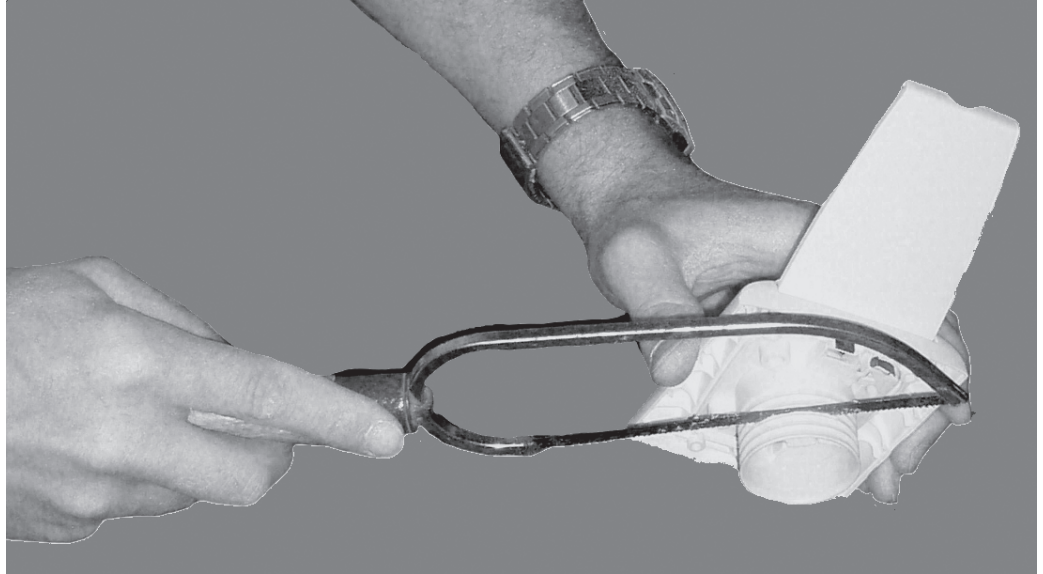
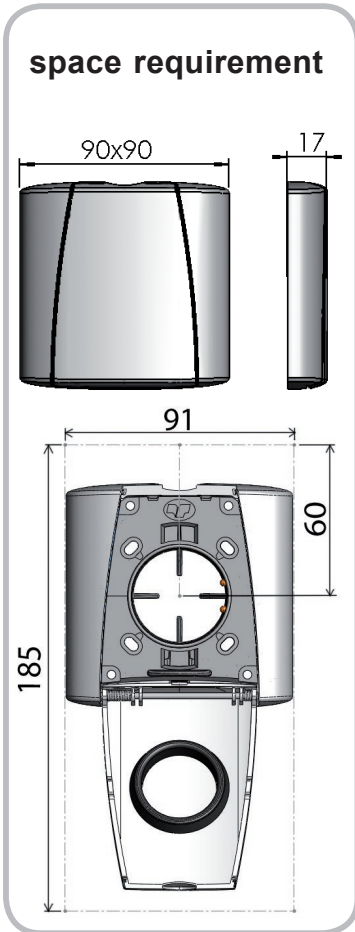
The starting circuit operates at a voltage of approximately 24V, which means that the installer does not need to be an electrician. Pull the low voltage wire from the low voltage lead of the central unit to the leads of the wall inlets and the sweep slot, if available. The wall inlets may be connected using parallel connection or the low voltage wires may be concatenated with each other only at the central unit. Install low voltage wires into protective tubing in cast and masoned sites. We also recommend using protective tubing in log houses. In other cases, the wires inside walls or ceilings may be attached to the exhaust pipe with zip ties, for example, but they can also be installed using the most convenient route. If you need to extend the low voltage wire away from the wall inlet, ensure that the connections are reliable.

LOW VOLTAGE WIRE INSTALLATION TO THE COVER ASSEMBLY



Shorten the wires so that approximately 20 cm is left for the connection. Separate approx. 10 cm of low voltage wire from each other and peel off roughly 1 cm of insulation. If you need to extend the low voltage wire to the next inlet, twist the peeled ends of the wires together. Place the tip of a chisel point (width 3 mm) screwdriver into the triangle-shaped groove and twist the end of the spring open by turning the screw-driver 90°. Place the peeled end of the wire under the end of the spring and release the spring by removing the screwdriver. Alternatively, you may install the wire from the opposite direction, at the base of the cover assembly muff. Connect the second wire in the same way.

COVER ASSEMBLY INSTALLATION



A mounting bracket or elbow coupling must always be installed between the dust piping and the cover assembly. It is there to prevent long objects from entering the system. They might cause a blockage. Select the proper attachment for the cover assembly in terms of wall material.

Once the wall has been painted, wallpapered or otherwise finished, install the cover assembly as follows:











1. Remove the moulding cover of the mounting bracket.
2. Measure the gap between the mounting bracket or the elbow coupling and the finished wall.
3. If the gap is more than 20 mm, use an extension between the mounting bracket or the elbow coupling and the cover assembly.
4. If the gap is 0-8 mm, remove three sealing grooves from the coupling muff of the cover assembly with a sharp knife or a fine-toothed saw. If the gap is 8-12 mm, remove two sealing grooves from the coupling muff of the cover assembly. Do not shorten the coupling muff if the gap is more than 12 mm.
5. Place the sealing in the outermost groove of the coupling muff and fit the cover assembly into place.
6. Screw all cover assembly screws equally tight with a screwdriver. Check that all edges of the frame are pressed evenly against the wall surface. Do not tighten the screws too much.

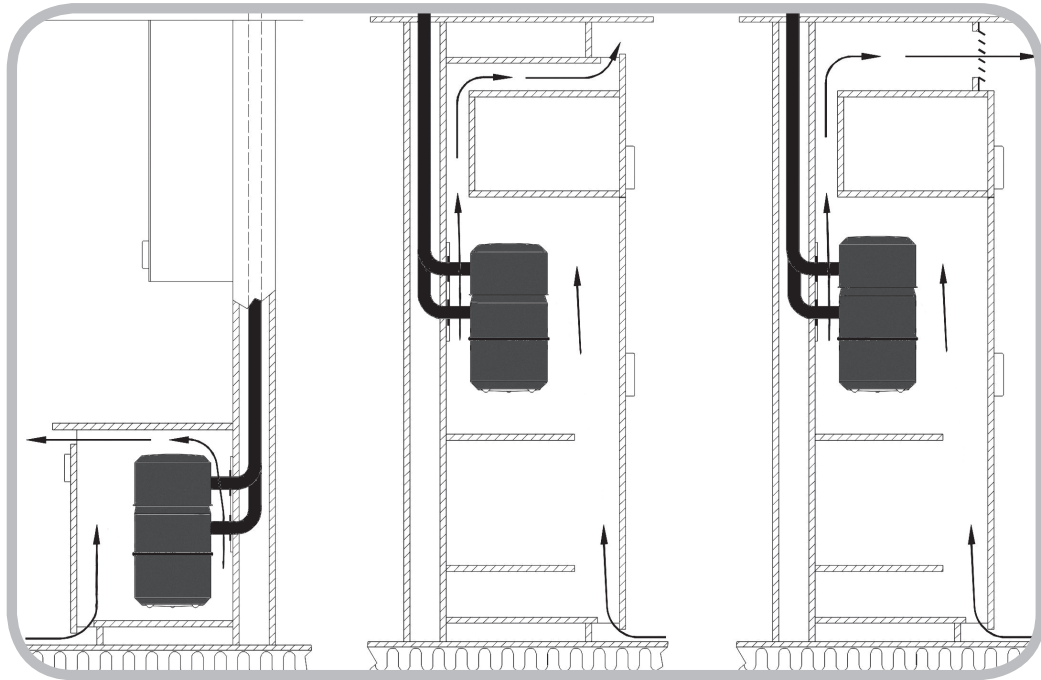
Ensure that all the screws are equally tight. An uneven tightening or tightening the screws too tightly may bend the cover assembly and make the cover difficult to open.

INSTALLATION OF THE CENTRAL UNIT

CENTRAL UNITS

Central units should be installed in warm spaces. Do not install central units in a space where the temperature may drop to below +5°C or rise above +35°C, even when the device is running. The connection lead in the central units is approximately 1 metre long and it is connected to a 230V socket that is protected by a slow blow plug fuse of at least 10A or an automatic 16A fuse. The heat of the central unit's motor is released into the installation space. Therefore it is necessary to make sure that the air around the central unit moves freely and the ventilation in the installation space works. When selecting a central unit model, the length of the dust pipe between the central unit and the furthest wall inlet is most significant. The central unit brochure specifies which model is suited for which maximum length in metres.

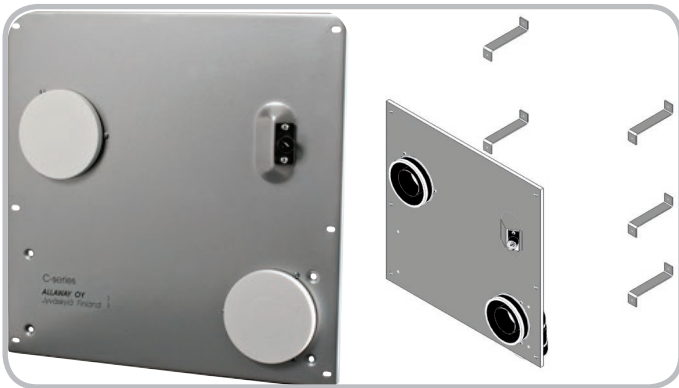
Model	Width (mm)	Height (mm)	Installation space	Casing class	Protection class	Dust canister volume (litres)	Description	Maximum pipe length (m)
 A 60/ V6 BA 60	340	730	Service and utility room or storage area	IPx4 splash-proof	I, i.e. protection earthed	20	Efficient, for premises of all sizes	60
 A 30/ BA 30 A 40/ BA 40	340	730	Service and utility room or storage area	IPx4 splash-proof	II, i.e. double insulated	20		35 45
 A 40 LCD/ BA 40 LCD	340	730	Service and utility room or storage area	IPx0 dry spaces	I, i.e. protection earthed	20		45
 C 30/ PM 30 C 40/ PM 40 C 40 Sonis PM 40 Sonis	350	595	Dry/wet room, storage area or service and utility room	IPx4 splash-proof	II, i.e. double insulated	13	Small, efficient and silent, for premises of all sizes	35 45 45
 C 40 LCD/ PM 40 LCD	350	595	Dry room, storage area or service and utility room	IPx0 dry spaces	I, i.e. protection earthed	13		45
 DV V3 V4	320	630	Storage area or other secondary space	IPx2 drip-proof	II, i.e. double insulated	14	Small and economical	30 30 35
 Duo	440	300	Dry room, storage area or service and utility room	IPx0 dry spaces	II, i.e. double insulated	Device must ALWAYS be equipped with an Allaway microfibre dust bag. The capacity of the dust bag is 10 litres.	Small spaces. Including premises where there are no outlets for exhaust air.	30
 M 1000	340	730	Service and utility room or storage area	IPx0 dry spaces	I, i.e. protection earthed	20	For larger sites, such as large detached houses or day care centres.	60
 X 30/ AX 30 X 40/ AX 40 X 50/ AX 50	375	575	Dry/wet room, storage area or service and utility room	IPx4 splash-proof	II, i.e. double insulated	14	Compact and economical, for premises of all sizes.	30 40 55
 Z 35/ AZ 35 Z 35i/ AZ 35i Z 45/ AZ 45 Z 45i/ AZ 45i Z 55/ AZ 55 Z 55i/ QZ 55i	345	780	Dry room, storage area or service and utility room	IPx0 dry spaces	II, i.e. double insulated	20	Efficient, for premises of all sizes.	35 35 45 45 55 55



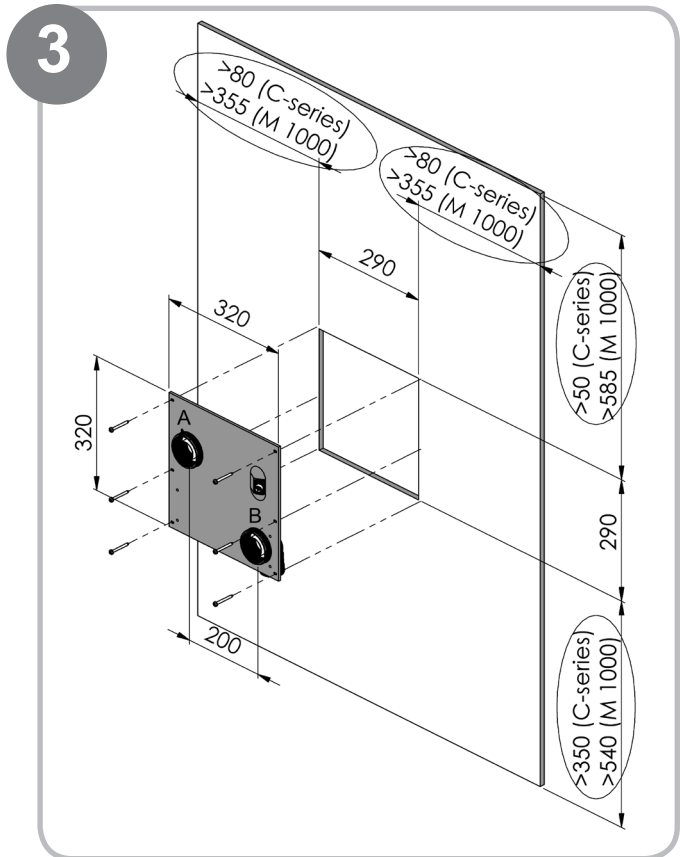
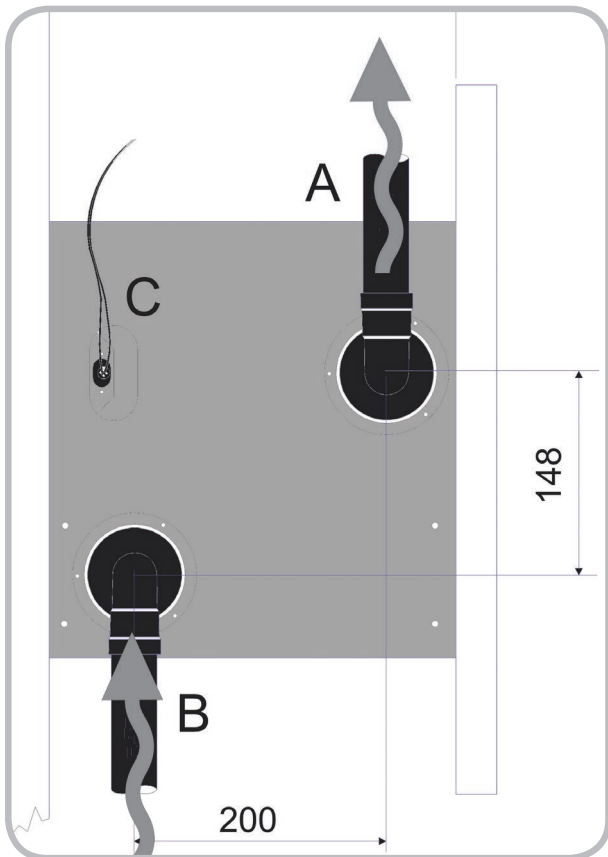
Only use C, X, Z or Zi series or Duo central units for closet installations. Because ventilation air flow is blocked in closet installations, you must make ventilation air holes in the closet at the same level as the bottom of the central unit or below it, as well as above the central unit and on any intermediate shelves. The minimum size required is $6 \times \text{Ø } 50 \text{ mm}$ or e.g. $30 \times 400 \text{ mm}$ or the width of the doorway. The minimum free width of the closet must be 450 mm, minimum height 700 mm and minimum depth 450 mm. You must not cover the ventilation air holes.

INSTALLATION OF THE WALL BRACKET

Applies only for Finnish and Swedish



The installation wall of the wall bracket must be straight. Use a spirit level to ensure this. If necessary, the wall can be straightened using an additional installation panel.



EN: The wall bracket can be installed at the required height, as long as there is at least 50 mm free space below the C series central unit and at least 170 mm free space below the M 1000 central unit for emptying the dust canister.

The wall bracket is included in the PPC-44 piping package, or it can be purchased separately.

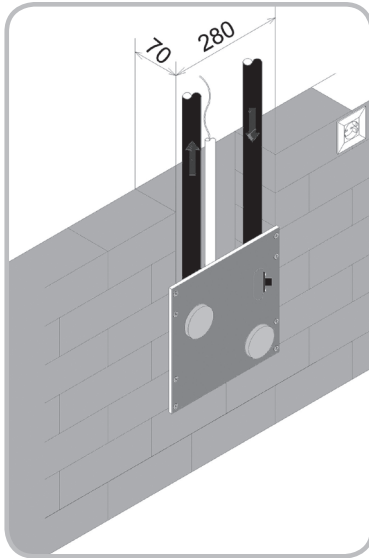
Install the wall bracket onto the surface of the wall panel. If you use surface installation for the pipes due to retrofitting or fire compartmentalisation, the wall bracket can be installed using separate surface installation equipment.

- A Exhaust
- B Suction
- C Low voltage wire

Note that the inlet and outlet pipes of the central unit come to the right side of the central unit. Leave the wall of the room behind the wall bracket open. Use an additional frame to add to the existing framework. Cut a hole of approximately 290 x 290 mm in size in the appropriate location on the wall panel as shown in figure 3. The figure shows a circle around the hole indicating the clearance required by the central unit. Leave a margin of approximately 20 cm on the low voltage wires to allow for manoeuvre. Attach the wall bracket securely to the wall structure. Use larger screws if necessary, for example in the case of installation to a rock wall. Connect the inlet and outlet pipes and connect the low voltage wires to the connectors of the wall bracket. The low voltage plug detaches easily. Replace the wall panel of the room behind the wall bracket.

WALL BRACKET FLUSH INSTALLATION INTO A BRICK WALL

Applies only for Finnish and Swedish

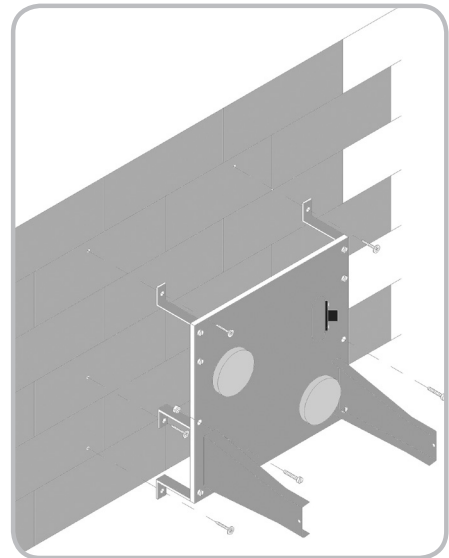


Make grooves for dust pipes during masonry. The grooves may be evened out after the pipes and the wall bracket have been installed.

WALL BRACKET SURFACE INSTALLATION

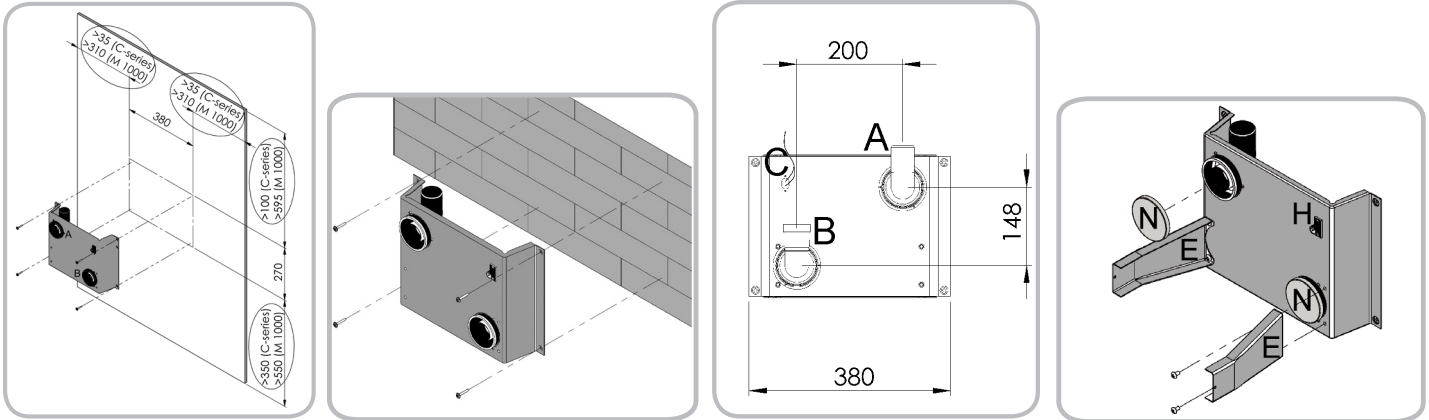
Applies only for Finnish and Swedish

When installing dust pipes on the surface, use mountings (6 pcs) for the wall bracket. Leave a clearance required by the central unit as indicated in figure 3. Attach the mountings to the wall bracket. Use all of the mountings supplied for the installation of the wall bracket. Install the dust pipes to the wall bracket couplings. Attach the wall bracket to the wall using appropriate equipment.



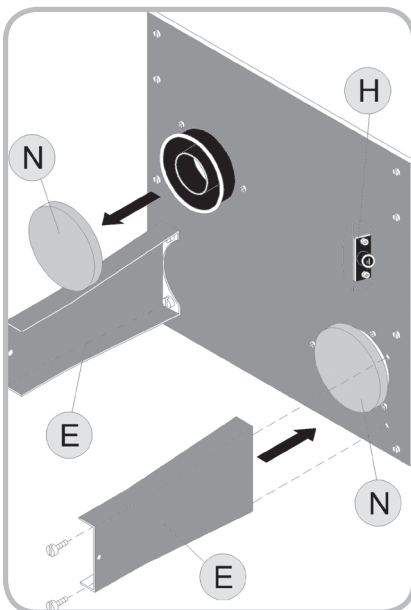
WALL BRACKET SURFACE INSTALLATION USING A SURFACE INSTALLATION BRACKET

Does not apply to Finnish and Swedish



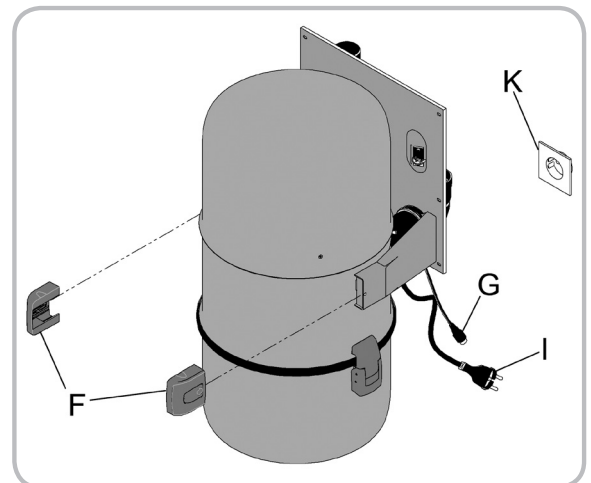
Surface installation bracket for C series and M 1000 central units. Leave a clearance required by the central unit around the wall bracket as indicated in figure 1. The figure shows a circle around the wall bracket indicating the clearance required by the central unit. Install the dust pipes to the wall bracket couplings. Attach the wall bracket to the wall using appropriate equipment.

CONNECTING A C SERIES OR M 1000 CENTRAL UNIT TO A WALL BRACKET



The supports are included in the central unit delivery.

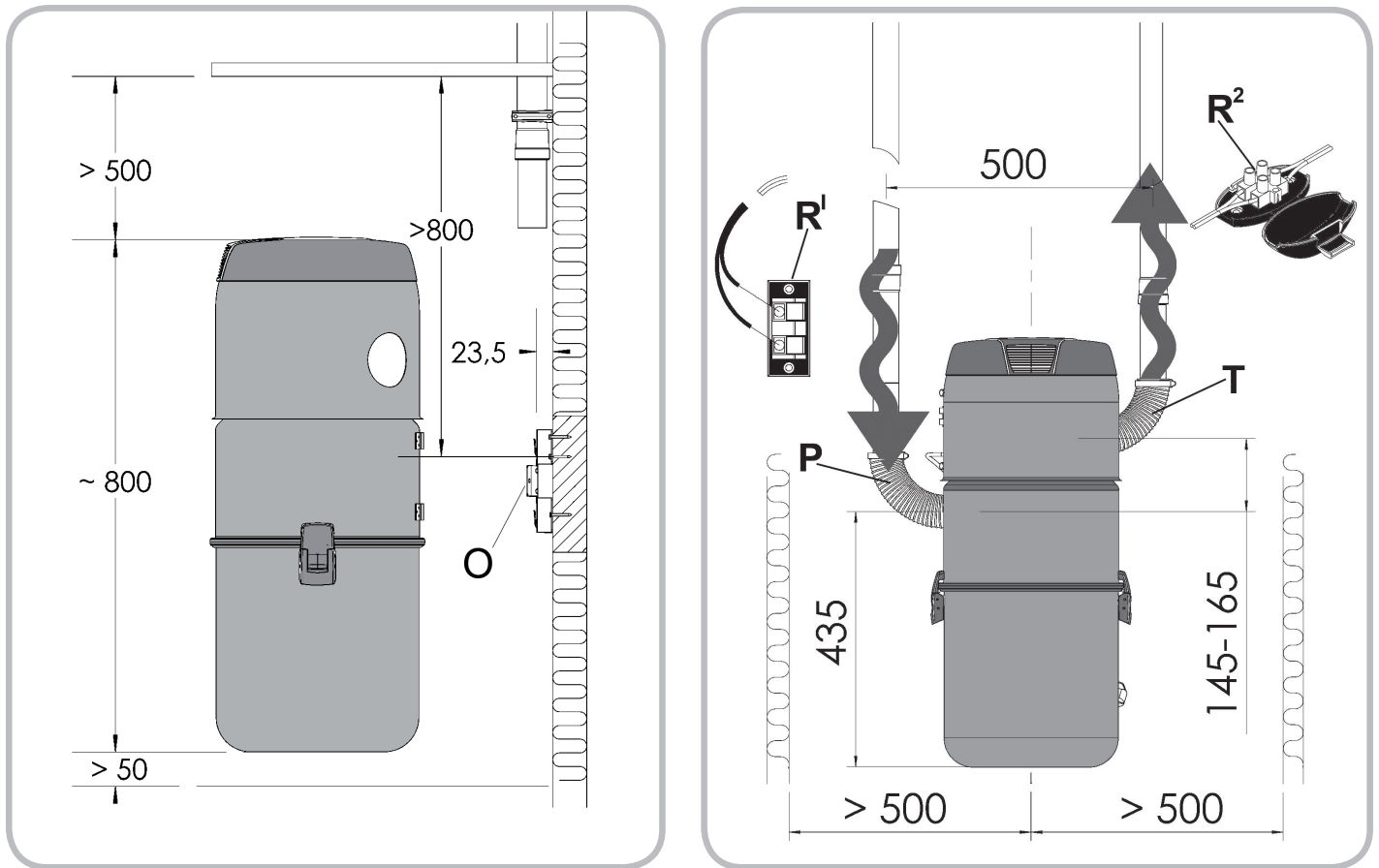
Attach the central unit supports (E) to the wall bracket panel. Tighten the screws. Detach the suction and exhaust pipe protective caps (N).



Push the central unit into place. The rubber dampers on the sides of the machine guide the central unit to its correct place. Lock the central unit into the supports with end plugs (F).

Connect the low voltage plug (G) from the central unit to the lead (H) in the wall bracket and connect the power cord (I) to a wall socket (K). Check the operation of the central unit by connecting the starting circuit of the central unit from the low voltage plug (G) with metal thread.

INSTALLATION OF THE A SERIES AND V 60 CENTRAL UNIT

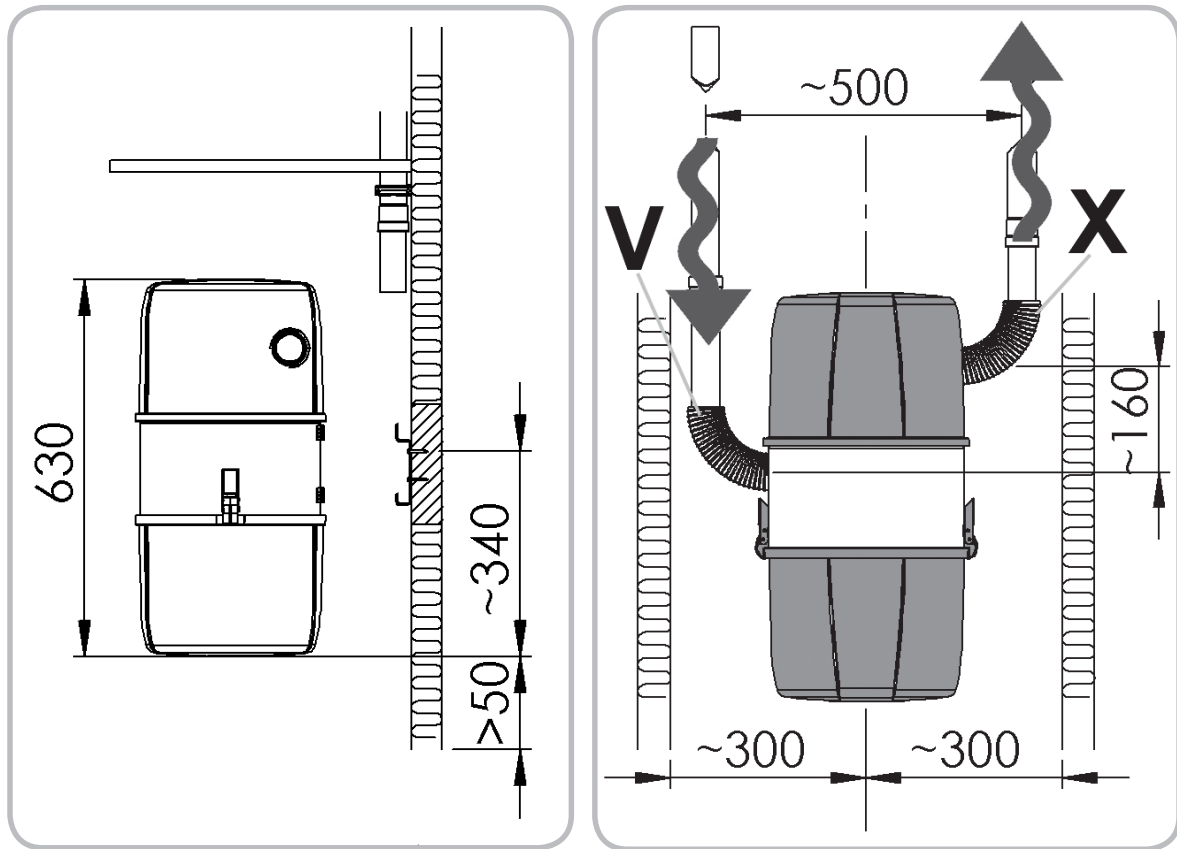


Screw the wall bracket (O), delivered with the central unit, firmly to a wall. Lift the central unit onto the wall bracket. Connect the suction piping to the central unit with a twist hose (P). Depending on the model, connect the ends of the low voltage wire to the leads either in the upper part of the device (R1) or the end of the low voltage wire (R2). Connect the exhaust pipe to the exhaust pipe which leads outside using a twist hose (T).

Check that the central unit works by connecting the unit's start circuit on the low voltage plug using a wire. The low voltage plug (R1) is on the side of models A 60 and Allaway Combo. In models A 30 and A 40, the low voltage plug is at the end of the low voltage wire (R2).

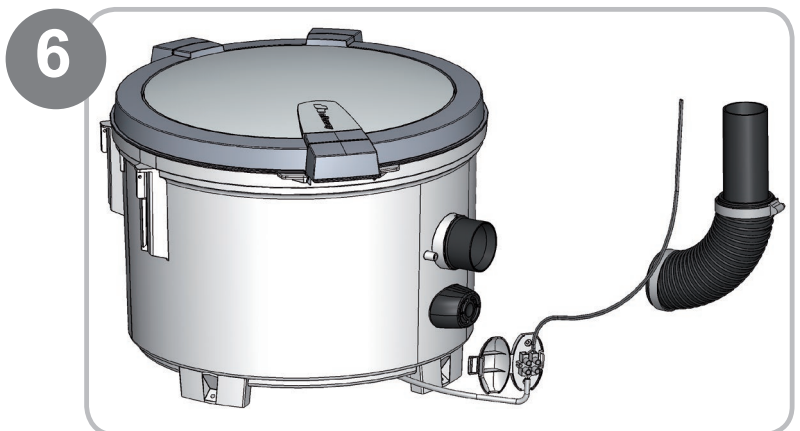
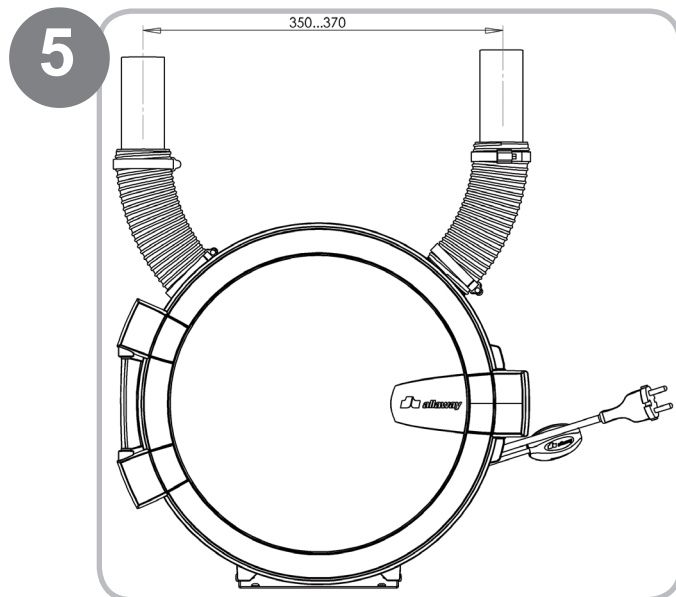
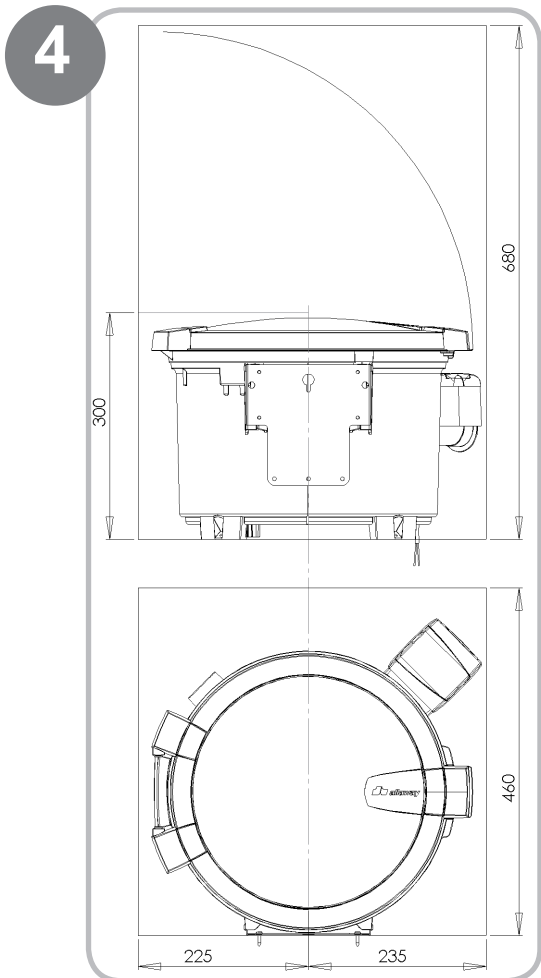
The A series central unit may not be installed into a closet or any other cramped space. In order for the motor cooling ventilation to function properly, there has to be at least 500 mm of free space on both sides of the central unit (from the centre of the unit to the wall) and above the central unit, and the air must be able to move freely around the central unit.

INSTALLATION OF THE DV 30 / V3 / V4 MODEL CENTRAL UNIT



Screw the wall bracket (U), delivered with the central unit, firmly to a wall. The wall bracket can be installed at the required height, as long as there is at least 50 mm free space below the central unit for emptying the dust canister. Lift the central unit onto the wall bracket. Connect the suction piping to the central unit with a twist hose (V). Connect the exhaust pipe to the exhaust pipe which leads outside using a twist hose (X). Connect the low voltage wires to the low voltage connector on the unit.

INSTALLATION OF THE DUO CENTRAL UNIT

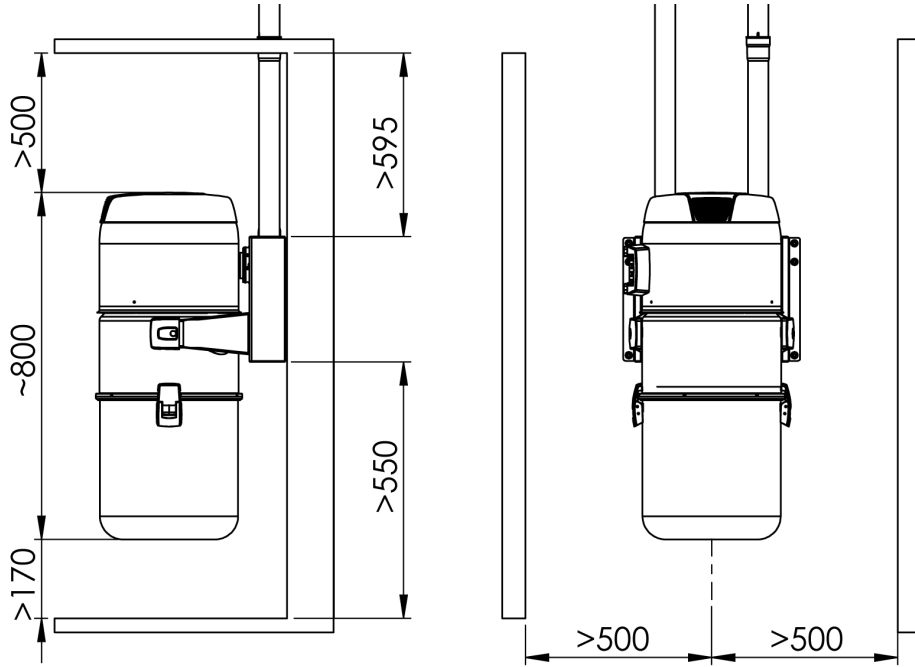


The Duo unit can be installed horizontally or vertically. Note that Duo's suction coupling and optional wall inlet are located in the middle of the unit or above to prevent vacuumed dust from returning to the pipe system when Duo is switched off. Figure 4 shows the minimum space required by Duo. Duo comes with a wall bracket suitable for different kinds of wall structures. For installation instructions, refer to Duo's operating and maintenance instructions. Keep the wall material and thickness in mind when choosing suitable mounting screws.

Lead the Duo exhaust air outside by connecting the Duo exhaust coupling to the exhaust pipe with a twist hose (Figure 5), or, if that is not possible, purchase a separate HEPA exhaust air filter. Connect the suction pipe system to the central unit with a twist hose (Figure 5). Connect the low voltage wires to the low voltage connector (Figure 6) on the Duo unit. Duo's low voltage plug is at the end of the low voltage wire. Check that the central unit works by connecting the unit's start circuit on the low voltage connector using a wire.

INSTALLATION OF THE M 1000 CENTRAL UNIT

7



The wall bracket for the M 1000 central unit is the C series wall bracket. See wall bracket installation instructions and central unit fastening instructions in section M 1000 installation. The M1000 safety distances must be in accordance with Figure 7.

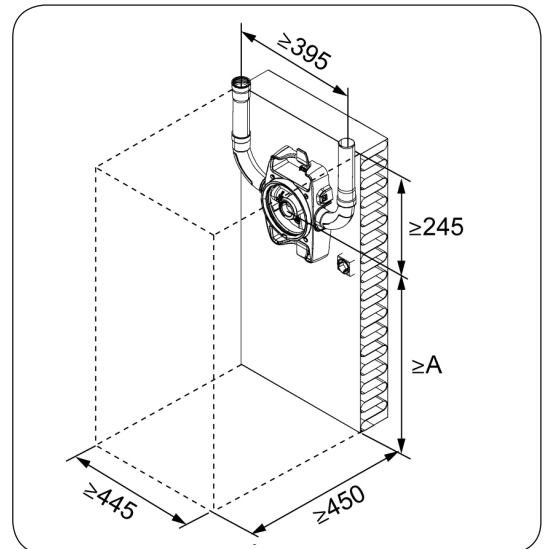
The M 1000 central unit may not be installed into a closet or any other cramped space. In order for the motor cooling ventilation to function properly, there has to be at least 500 mm of free space on both sides of the central unit (from the centre of the unit to the wall) and above the central unit, and the air must be able to move freely around the central unit. See safety distances in Figure 7.

INSTALLATION OF THE WALL BRACKET FOR X AND Z SERIES CENTRAL

Leave sufficient space for the central unit around the X and Z series wall bracket.

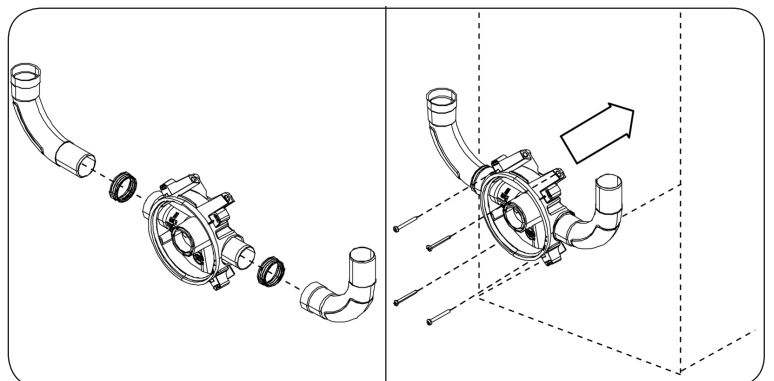
Install the wall bracket onto the surface of the wall panel. The installation wall of the wall bracket must be straight. Use a spirit level to ensure this. If necessary, the wall can be straightened using an additional installation panel. Leave sufficient margins on the low voltage wires.

Series	A (mm)
X	479
Z	684

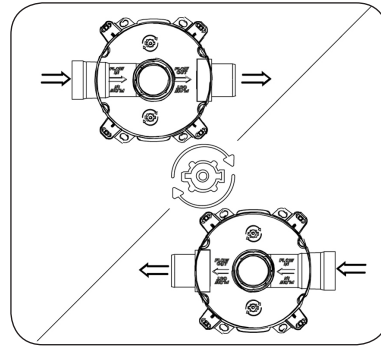


Note:

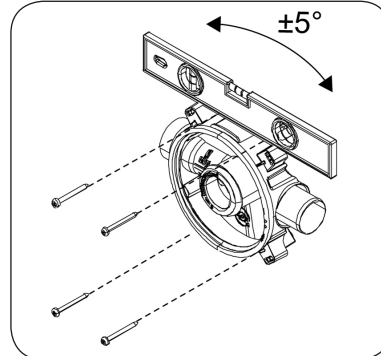
If the central unit is to be installed in a narrow closet, attach the pipe elbows to the inner part of the wall bracket before installing the inner part on the wall.



1. Make sure that the input and output sides of the piping leading to the central unit are on the correct sides of the wall bracket. The inner part of the wall bracket can be installed either way around.



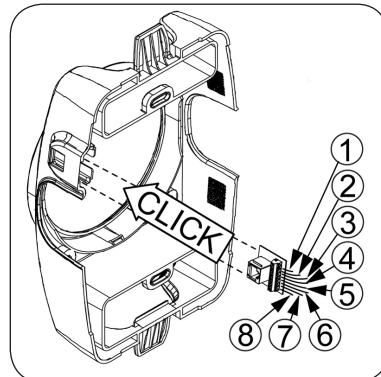
2. Align the inner part of the wall bracket vertically on the wall, with a maximum deviation of ± 5 degrees.



3. Attach the inner part of the wall bracket securely to the wall structure with screws (4,2x50 mm TX20). Use the wall plug if necessary (wall plug 6 x 30).

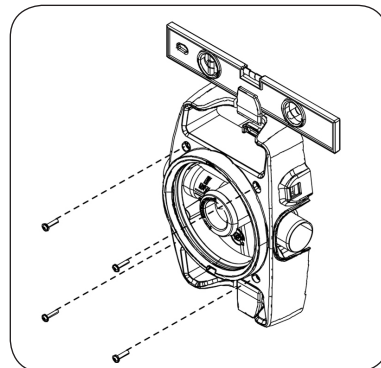
4. Connect the low voltage wires to the wall bracket's connector in accordance with the table below.

1	GND	GND
2	AHU1	IV operation. Voltage free contact 24 VAC/DC 1 A. (see user guide section 3.4 (X, Z) / 3.8 (Zi))
3	AHU2	IV operation. Voltage free contact 24 VAC/DC 1 A. (see user guide section 3.4 (X, Z) / 3.8 (Zi))
4	SW2	Low voltage wires (wall inlet control)
5	SW1	Low voltage wires (wall inlet control)
6	GND	GND Modbus (see user guide section 3.6)
7	RSA	RS485 A Modbus (see user guide section 3.6)
8	RSB	RS485 B Modbus (see user guide section 3.6)



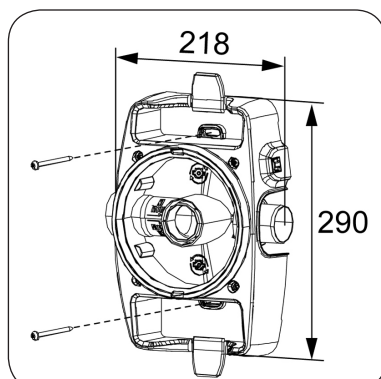
5. Connect the low voltage connector to the outer frame of the wall bracket.

6. Place the outer frame of the wall bracket vertically on top of the inner part of the wall bracket.

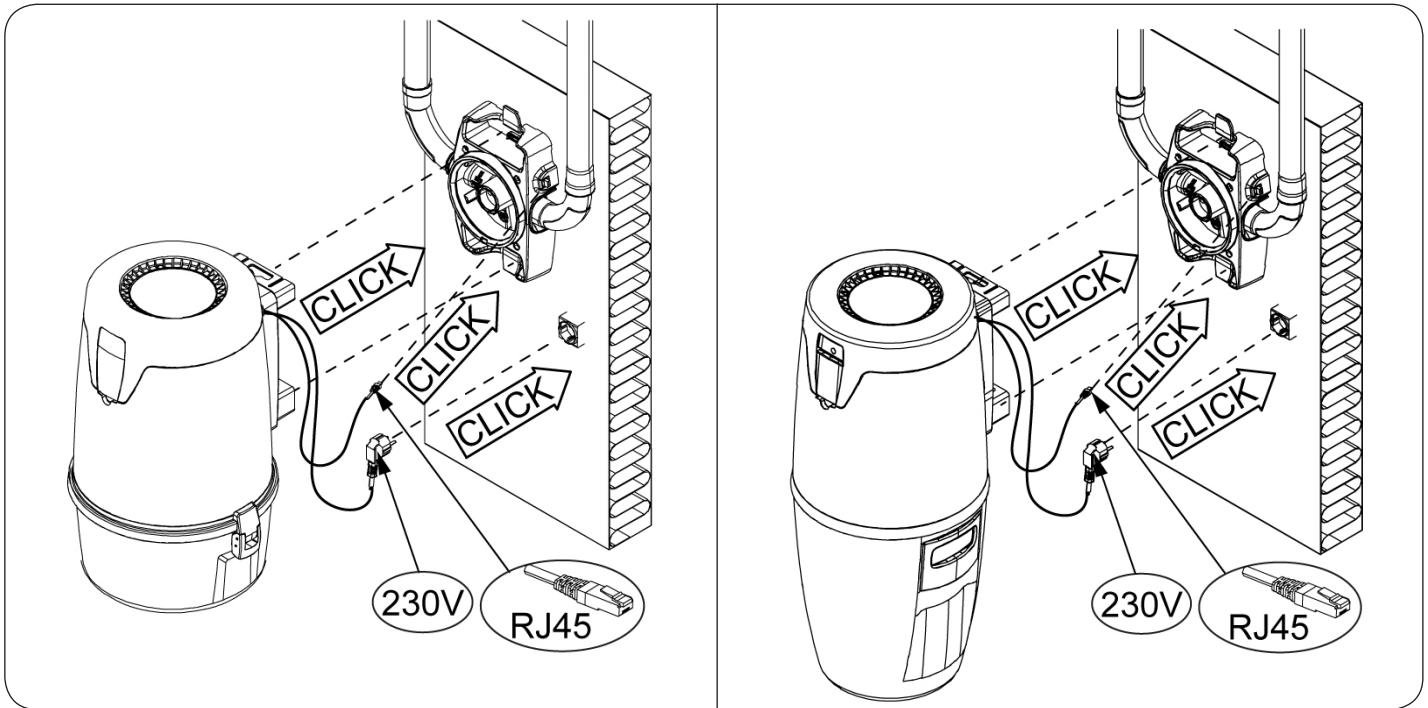


7. Attach the outer frame of the wall bracket to the inner part with screws (5x20 mm TX20).

Use the mounting lugs on the outer frame of the wall bracket for additional fastening, if necessary. (If mounting on a partition wall stud, for example. Screws not included in delivery.)



INSTALLATION OF THE X AND Z SERIES CENTRAL UNIT



1. Install the central unit to the wall bracket.
2. Connect the central unit's RJ45 low voltage wire to the wall bracket's RJ45 low voltage terminal.
3. Plug in the power cord to the socket.
4. Check that the system works correctly by starting the central unit from a wall inlet or the cleaning equipment.

TESTING THE SYSTEM

Check that the system works before closing the wall structures.

To check that the system works:

1. Check the system for leaks:
 - Connect the cleaning equipment series to the wall inlet.
 - Close all other wall inlets.
 - Start the system.
 - Stop the airflow from the cleaning equipment series by, for example, sealing the end of the telescopic arm with a piece of cardboard.
 - Cover the bypass valve (with the exception of the M 1000 central unit) with a piece of cardboard for the duration of the test.
 - Keep the central unit on while the bypass valve is closed for a maximum of 20 seconds. If air comes out of the exhaust pipe within 10 seconds of covering the bypass valve, there is a leak in the piping system. Locate and fix the leak.

Do not keep the system running for longer than 20 seconds with the bypass valve covered. If the configuration is fully airtight, the turbine will not get enough air and it will become overheated and possibly damaged.

Do not carry out the airtightness check with excess pressure.

2. Check that the system works with all wall inlets:
 - Suck a small object, such as a crumpled piece of paper, into each wall inlet.
 - Check that the object runs from each wall inlet into the dust canister.

If the object does not reach the dust canister, locate and fix the blockage.

